



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,360	10/21/2003	Sydney Gearing	GSCA-10002/01	4243
25006	7590	10/06/2005	EXAMINER	
GIFFORD, KRASS, GROH, SPRINKLE & CITKOWSKI, P.C			VANAMAN, FRANK BENNETT	
PO BOX 7021			ART UNIT	
TROY, MI 48007-7021			PAPER NUMBER	

3618

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/690,360

Applicant(s)

GEARING, SYDNEY

Examiner

Frank Vanaman

Art Unit

3618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/12/04</u> .   | 6) <input type="checkbox"/> Other: ____.                                    |

### **Drawings**

1. The drawings are objected to because the section shown in figure 6 is inconsistent with the structure of elements 37 as shown in the perspective of figure 2 (note slots 39). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### **Specification**

2. The abstract of the disclosure is objected to because of the following minor informality: on line 7, there appears to be a word, such as - -to- - missing between "transmitted" and "the". Correction is required. See MPEP § 608.01(b).

3. The disclosure is objected to because of the following informalities: on page 4, line 23, "skies" should be - -skis- -.

Appropriate correction is required.

4. In the specification at page 3, lines 11-13, and in the abstract at lines 10-12, applicant has stated that "any sound traveling ... exiting the exhaust port of the chamber will be out of phase with any sound exiting the exhaust opening". This is not accurate, in that a sound having a frequency component with a wavelength (or integral number thereof) equal to the difference in length of the two paths will not be out of phase, but will be in phase for that particular frequency and its harmonics. In this case it appears

Art Unit: 3618

that the specific use of "any" is misrepresentative of the operation of the inventive device.

### **Claim Objections**

5. Claim 5 is objected to because it has been written by applicant so that it depends from itself. For the purpose of examination the examiner is interpreting claim 5 as being dependent from claim 4. Appropriate correction is required.

6. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 22 (second occurrence) through 27 have been renumbered 23 through 28 (note that applicant has presented two claims numbered '22'). In general, care should be taken in the presentation of claims such that they are (a) properly dependent and (b) sequentially numbered.

7. In claim 22 (first occurrence) at line 4, it appears as though "the end" should be -- an end of the--. Appropriate correction is required.

### **Claim Rejections - 35 USC § 102**

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 2, 4, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawamoto (US 6,334,501). Kawamoto teaches a sound reducing component for a vehicle which may be used off road, and in combination with at least one vehicle silencer (4), including an adapter (30) having an internal wall which defines an exhaust chamber, an inlet (3a) at an open end thereof, an exhaust port (connecting 30 and 32), oriented at an angle of between 0 and 90 degrees from an axis of the exhaust discharge chamber, a discharge opening (lateral opening in 31 extending to 7 and 50a), the port

Art Unit: 3618

capable of communicating exhaust and sound to the atmosphere (through 3), he discharge opening operable to communicate exhaust into a passage (50a), a U-joint (5) having first and second ends, the first end being connected to the exhaust passage (50a), the second end being connected to an extension (e.g., 40, 40a)

### **Claim Rejections - 35 USC § 103**

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 3, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawamoto (cited above).

As regards claim 3, the reference to Kawamoto fails specifically teach the area of the exhaust port as being smaller than that of the open end of the chamber. In that some flow is directed to the port and some is directed to the U joint and thence the extension, it would have been obvious to one of ordinary skill in the art at the time of the invention to constrict the opening into the port so as to influence the exhaust flow to pass through both the port and the discharge opening.

As regards claims 8 and 9, inasmuch as the reference to Kawamoto is directed to use with an exhaust system carrying high temperature gas, and further directed to quieting of the exhaust flow, it would have been obvious to one of ordinary skill in the art at the time of the invention to make at least a portion of the component from a heat resistant material so as to ensure that the material does not break down in contact with high temperature exhaust, and further it would have been obvious to one of ordinary skill in the art at the time of the invention to make at least a portion of the component from a sound deadening material so as to ensure that as little noise as possible is transmitted to the exterior environment, as far as practical.

12. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawamoto in view of Holmes (US 1,591,088). The reference to Kawamoto is discussed

Art Unit: 3618

above and fails to teach the explicit provision of separate connecting elements for securing the first and second ends of the U-joint to the exhaust passage and extension, respectively. Holmes teaches the use of a connector device (e.g., 22) for connecting portions of an exhaust system together, to allow an adjustable connection. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the connection between the U-joint and exhaust passage and extension taught by Kawamoto with separate connector elements such as taught by Holmes, for the purpose of allowing the exhaust structure to be easily assembled together.

13. Claims 10-18, 21, and 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawamoto in view of Petley (US 6,591,935). The reference to Kawamoto is discussed above, and fails to teach that the adapter is arranged to be placed with its inlet connected to the exhaust end of a silencer. Petley teaches that it is well known to provide an exhaust system having a pre-existing silencer (e.g., 14) and add a further exhaust-silencing device (e.g., 28) downstream of the existing silencer, to further reduce the noise output. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the adapter arrangement taught by Kawamoto downstream of a first silencer, e.g., such that the input 3a is connected to the discharge of the silencer, as taught by Petley, for the purpose of providing yet further sound reduction.

As regards claims 11, 12, 27 and 28, inasmuch as the references to Kawamoto and Petley are directed to use with an exhaust system carrying high temperature gas, and further directed to quieting of the exhaust flow, it would have been obvious to one of ordinary skill in the art at the time of the invention to make at least a portion of the component from a heat resistant material so as to ensure that the material does not break down in contact with high temperature exhaust, and further it would have been obvious to one of ordinary skill in the art at the time of the invention to make at least a portion of the component from a sound deadening material so as to ensure that as little noise as possible is transmitted to the exterior environment, as far as practical.

As regards claim 13, inasmuch as Kawamoto teaches that at least the output end of the exhaust passage (50a) is directed to be substantially parallel with the input (e.g.,

Art Unit: 3618

3a, downstream end of 2a, note figure 4), it would have been obvious to one of ordinary skill in the art at the time of the invention to place the upstream silencer taught by Kawamoto as modified by Petley in a portion of the exhaust line which is parallel with the passage (e.g., the downstream section of 2a) for the purpose of locating the various sound reducing components closely proximate each other.

As regards claims 16 and 24, the reference to Kawamoto as modified by Petley fails specifically teach the area of the exhaust port as being smaller than that of the open end of the chamber. In that some flow is directed to the port and some is directed to the U joint and thence the extension, it would have been obvious to one of ordinary skill in the art at the time of the invention to constrict the opening into the port so as to influence the exhaust flow to pass through both the port and the discharge opening.

As regards claim 23, while the reference to Kawamoto as modified by Petley fails to explicitly teach the provision of a fastener provided on the exhaust passage of the adapter, which is operable to secure the adapter to the vehicle, Kawamoto does teach the provision of fastening devices (e.g., 61, 62) for connecting to the vehicle, and it would have been obvious to one of ordinary skill in the art at the time of the invention to locate a fastener proximate the exhaust passage of Kawamoto as modified by Petley, in order to accommodate connection to a vehicle having a fastener receiving portion located more forwardly, facilitating the interchangeable use of the system on plural vehicle structures.

14. Claims 19, 20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawamoto in view of Petley and Holmes. The reference to Kawamoto as modified by Petley is discussed above and fails to teach the explicit provision of separate connecting elements for securing the first and second ends of the U-joint to the exhaust passage and extension, respectively. Holmes teaches the use of a connector device (e.g., 22) for connecting portions of an exhaust system together, to allow an adjustable connection. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the connection between the U-joint and exhaust passage and extension taught by Kawamoto with separate connector elements such as taught by

Art Unit: 3618

Holmes, for the purpose of allowing the exhaust structure to be easily assembled together.

### Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tobey (US 1,048,111), Sawders et al. (US 1,342,464), Carroll (US 2,706,014), Tanaka (US 4,290,501), Takato et al. (US 5,014,817), Feuling (US 5,033,581), Nozaki (US 6,438,949), and Mukaida (US 6,789,644) teach exhaust structures of pertinence.

16. Any inquiry specifically concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is 571-272-6701.

Any inquiries of a general nature or relating to the status of this application may be made through either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A response to this action should be mailed to:

Mail Stop \_\_\_\_\_  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450,

Or faxed to:

PTO Central Fax: 571-273-8300

**F. VANAMAN**  
**Primary Examiner**  
**Art Unit 3618**

Handwritten signature of F. Vanaman, dated 1/27/05.